AMENDMENTS TO THE CLAIMS

1. (Currently amended) A radiation measurement device for determining a wavelength-related characteristic of radiation from a radiation source, the radiation measurement device comprising:

a first beam dividing element located to input at least a portion of the radiation from the radiation source, and to output first and second portions of the radiation along first and second optical paths;

a first wavelength-dependent optical element located along [[a]] the first optical path;

a first optical power-measuring detector located along the first optical path after the first wavelength-dependent optical element to receive radiation ~~transmitted along the first optical path~~ filtered by the first wavelength-dependent optical element such that the first optical power-measuring detector outputs a first signal having a first wavelength dependence that depends on the first wavelength-dependent optical element; [[and]]

a second optical power-measuring detector located along the second optical path to receive radiation transmitted along the second optical path; and

a linear polarizer configuration comprising at least one [[first]] linear polarizer ~~located along the first optical path before the first optical power-measuring detector~~,

wherein:

~~the radiation transmitted along the first optical path is incident on at least one polarization sensitive surface located along the first optical path before being received by the first optical power-measuring detector,~~ the second optical power-measuring detector outputs a second signal having a second wavelength dependence that is different from the first wavelength dependence;

a signal ratio based on at least the first and second signals is indicative of at least one of a radiation wavelength, a change in a radiation wavelength, a radiation frequency, and a change in a radiation frequency, of the radiation from the radiation source; and

the [[first]] linear polarizer ~~is located~~ configuration is arranged such that the ~~radiation received by the first optical power measuring detector has been linearly polarized by the first~~

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~~linear polarizer~~ signal ratio is substantially insensitive to variations in a polarization orientation of the radiation from the radiation source, the linear polarizer configuration comprising at least one of:

(a) a linear polarizer located to input radiation from the radiation source and output polarized radiation that is input to the first beam dividing element, and

(b) at least one linear polarizer arranged to receive the first and second portions of radiation along first and second optical paths and to polarize and transmit the first and second portions of radiation along the first and second optical paths such that each of the transmitted first and second portions of radiation has the same polarization, that polarization consisting of one of:

(i) approximately only the S-polarized components of radiation from the first beam dividing element, and

(ii) approximately only the P-polarized components of radiation from the first beam dividing element.

2. (Original) The radiation measurement device of Claim 1, wherein the wavelength-dependent optical element comprises a bandpass filter.

3. (Currently amended) The radiation measurement device of Claim 1, wherein the ~~at least one polarization-sensitive surface comprises a surface of the wavelength-dependent optical element~~ second optical path includes no wavelength-dependent optical element and the second signal is wavelength independent.

4. (Canceled)

5. (Currently amended) The radiation measurement device of Claim [[4]] 1, wherein the first beam dividing element is selected from a group consisting of a first grating, and a first beamsplitter that is partially transmissive and partially reflective.

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6. (Currently amended) The radiation measurement device of Claim [[4]] 1, wherein the ~~at least one polarization-sensitive surface comprises a surface of the first beam dividing element~~ linear polarizer configuration comprises element (a) and not element (b).

7. (Currently amended) The radiation measurement device of Claim [[4]] 1, wherein the ~~radiation received by the first optical power-measuring detector is filtered by the first wavelength dependent optical element, and the radiation measurement device provides first and second signals from the first and second optical power-measuring detectors, respectively, wherein a signal ratio based on at least the first and second signals is usable to determine the wavelength-related characteristic of the radiation from the radiation source and the signal ratio is insensitive to variations in a polarization orientation of the radiation from the radiation source~~ linear polarizer configuration comprises element (b) and not element (a).

8. (Currently amended) The radiation measurement device of Claim [[7]] 1, further comprising a signal processing circuit which receives the first and second signals from the first and second optical power-measuring detectors, respectively, and determines the signal ratio based on the first and second signals~~, wherein the signal ratio is indicative of at least one of a radiation wavelength and a radiation frequency of the radiation from the radiation source~~.

9. (Currently amended) The radiation measurement device of Claim [[4]] 1, further comprising a second wavelength-dependent optical element located along the second optical path after the first beam dividing element and before the second optical power-measuring detector, such that the second wavelength dependence depends on the second wavelength-dependent optical element.

10. (Currently amended) The radiation measurement device of Claim 9, wherein the first and second wavelength-dependent optical elements comprise first and second portions of a single wavelength-dependent optical element, and the ~~at least one polarization-sensitive surface comprises~~ first and second optical paths have different respective first and second angles of incidence relative to a surface of the single wavelength-dependent optical element.

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11. (Currently amended) The radiation measurement device of Claim 10, ~~which is configured such that the second portion of radiation transmitted along the second optical path~~ wherein one of the first and second optical paths is incident on the surface of the single wavelength-dependent optical element at a normal angle of incidence.

12. (Currently amended) The radiation measurement device of Claim 10, wherein ~~the second portion of radiation transmitted along~~ the second optical path is incident on the surface of the single wavelength-dependent optical element at a non-normal angle of incidence that is different from the non-normal angle of incidence of ~~the first portion of radiation transmitted along~~ the first optical path.

13. (Currently amended) The radiation measurement device of Claim 10, wherein ~~the first beam dividing element comprises a beamsplitter that is partially transmissive and partially reflective~~ the linear polarizer configuration comprises element (b), and in element (b) each of at least one ~~the first~~ linear polarizer provides the same polarization angle which is [[:]]

~~located between the beamsplitter and the single wavelength-dependent optical element;~~

~~oriented such that its polarization is~~ one of P1) perpendicular to, and P2) parallel to, a plane that is parallel to both the direction of the radiation transmitted along the first optical path and a direction normal to a beam dividing surface of the ~~beamsplitter;~~ first beam dividing element and is located such that the radiation received by both the first and second optical power-measuring detectors has been linearly polarized ~~by the first linear polarizer~~.

14. (Currently amended) The radiation measurement device of Claim [[10]] 13, wherein the ~~first beam dividing element~~ beam dividing surface comprises a grating having grooves, and the ~~first linear polarizer is:~~

~~located between the grating and the single wavelength-dependent optical element;~~

~~oriented such that its~~ polarization angle is one of P1) perpendicular to, and P2) parallel to, the grooves of the grating~~; and~~

~~located such that the radiation received by both the first and second optical power-measuring detectors has been linearly polarized by the first linear polarizer~~.

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15. (Canceled)

16. (Currently amended) The radiation measurement device of Claim 9, further comprising:

a second beam dividing element;

a third beam dividing element;

a third optical power-measuring detector located along a third optical path after ~~the first~~ a third wavelength-dependent optical element to receive radiation ~~transmitted along the third optical path~~ filtered by the third wavelength-dependent optical element, such that the third optical power-measuring detector outputs a third signal having a third wavelength dependence that depends on the third wavelength-dependent optical element; and

a fourth optical power-measuring detector located along a fourth optical path after ~~the second~~ a fourth wavelength-dependent optical element to receive radiation ~~transmitted along the fourth optical path~~ filtered by the fourth wavelength-dependent optical element, such that the fourth optical power-measuring detector outputs a fourth signal having a fourth wavelength dependence that depends on the fourth wavelength-dependent optical element,

wherein:

the fourth wavelength dependence is different from the third wavelength dependence; and in element (a):

the linear polarizer is located to input radiation from the radiation source and output polarized radiation to the second beam dividing element, and the second beam dividing element then divides the polarized radiation and outputs it to both ~~is located along the first optical path after~~ the first beam dividing element and ~~before the first wavelength-dependent optical~~ the third beam dividing element, and;

the ~~second~~ third beam dividing element receives ~~the first portion of radiation transmitted along the first optical path~~ polarized radiation from the ~~first~~ second beam dividing element and divides and transmits polarized radiation along the third and fourth optical paths. ~~both a first optical path sub-portion of that radiation along the first optical path and a third optical path sub-portion of that radiation along the third optical path to~~

~~the first wavelength-dependent optical element, and the first wavelength-dependent optical element transmits both the first optical path sub-portion of radiation and the third optical path sub-portion of radiation along the first and third optical paths to the first and third optical power-measuring detectors, respectively; and~~

~~the third beam dividing element receives the second portion of radiation transmitted along the second optical path from the first beam dividing element and transmits both a second optical path sub-portion of that radiation along the second optical path and a fourth optical path sub-portion of that radiation along the fourth optical path to the second wavelength-dependent optical element, and the second wavelength-dependent optical element transmits both the second optical path sub-portion of radiation and the fourth optical path sub-portion of radiation along the second and fourth optical paths to the second and fourth optical power-measuring detectors, respectively.~~

17. (Currently amended) The radiation measurement device of Claim 16, wherein the ~~second~~ <u>first</u> and third beam dividing elements comprise ~~first and second~~ portions of a single beam dividing element different from the ~~first~~ <u>second</u> beam dividing element~~, and the first linear polarizer is located before the first beam dividing element~~.

18. (Currently amended) The radiation measurement device of Claim [[9]] <u>16, wherein the third and fourth wavelength-dependent optical elements comprise portions of a single beam dividing element, and the third and fourth optical paths have different respective angles of incidence relative to a surface of that single wavelength-dependent optical element</u> ~~further comprising a second linear polarizer, wherein the first beam dividing element comprises a beamsplitter that is partially transmissive and partially reflective, and the first and second linear polarizers are similarly oriented such that their polarization orientation is one of P1) perpendicular to, and P2) parallel to, a plane that is parallel to the direction of the radiation from the radiation source at the beamsplitter and a direction normal to a beam dividing surface of the beamsplitter, and the second linear polarizer is located such that the radiation received by the~~

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~~second optical power-measuring detector has been linearly polarized by the second linear polarizer~~.

19-20. (Canceled)

21. (Currently amended) A method of determining a wavelength-related characteristic of radiation from a radiation source, the method comprising:

~~(a) inputting radiation from the radiation source, and transmitting a first beam of the input radiation along a first optical path that includes at least one surface of at least one optical element arranged such that the first beam is incident on the at least one surface at a non-normal angle of incidence;~~

~~(b) receiving the first beam along the first optical path with a wavelength-dependent optical element and outputting a first filtered beam along the first optical path;~~

~~(c) receiving the first filtered beam output by the wavelength-dependent optical element with a first optical power-measuring detector located along the first optical path;~~

~~(d) outputting a first detection signal from the first optical power-measuring detector; and~~

~~(e) linearly polarizing the radiation transmitted along the first optical path with a stable polarization orientation at a point along the first optical path that is before at least one of: (1) the first optical power-measuring detector and (2) the wavelength-dependent optical element~~

providing a first beam dividing element located to input at least a portion of the radiation from the radiation source, and to output first and second portions of the radiation along first and second optical paths;

providing a first wavelength-dependent optical element located along the first optical path;

operating a first optical power-measuring detector located along the first optical path after the first wavelength-dependent optical element to receive radiation filtered by the first wavelength–dependent optical element, such that the first optical power-measuring detector

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outputs a first signal having a first wavelength dependence that depends on the first wavelength-dependent optical element;

operating a second optical power-measuring detector located along the second optical path to receive radiation transmitted along the second optical path, such that the second optical power-measuring detector outputs a second signal having a second wavelength dependence that is different from the first wavelength dependence;

providing a linear polarizer configuration comprising at least one of:

(a) a linear polarizer located to input radiation from the radiation source and output polarized radiation to the first beam dividing element, and

(b) at least one linear polarizer arranged to receive the first and second portions of radiation along first and second optical paths and to polarize and transmit the first and second portions of radiation along the first and second optical paths such the each of the transmitted first and second portions of radiation has the same polarization, that polarization consisting of one of:

(i) approximately only the S-polarized components of radiation from the first beam dividing element, and

(ii) approximately only the P-polarized components of radiation from the first beam dividing element; and

determining a signal ratio based on at least the first and second signals, wherein the signal ratio is indicative of at least one of a radiation wavelength, a change in a radiation wavelength, a radiation frequency, and a change in a radiation frequency, of the radiation from the radiation source; and wherein due to the linear polarizer configuration the signal ratio is substantially insensitive to variations in a polarization orientation of the radiation from the radiation source.

22. (Currently amended) The method of Claim 21, ~~further comprising:~~

~~(f) dividing the input radiation from the radiation source to provide the first beam of the input radiation along the first optical path and a second beam of the input radiation along a second optical path;~~

~~(g) receiving the second beam along the second optical path with the wavelength-dependent optical element and outputting a second filtered beam along the second optical path;~~

~~(h) receiving the second filtered beam output by the wavelength-dependent optical element with a second optical power-measuring detector located along the second optical path;~~

~~(i) linearly polarizing the radiation transmitted along the second optical path with a stable polarization orientation at a point along the second optical path that is before at least one of: (2) the wavelength-dependent optical element, and (3) the second optical power-measuring detector; and~~

~~(j) outputting a second detection signal from the second optical power-measuring detector; and~~

~~(k) receiving and processing the first and second detection signals to determine at least one signal ratio based on at least the first and second detection signals, wherein the signal ratio is indicative of at least one of a radiation wavelength and a radiation frequency of the radiation from the radiation source and the signal ratio is insensitive to variations in a polarization orientation of the radiation from the radiation source~~ wherein the second optical path includes no wavelength-dependent optical element and the second signal is wavelength independent.

23. (New) The method of Claim 21, wherein a second wavelength-dependent optical element is provided along the second optical path after the first beam-dividing element and before the second optical power-measuring detector, such that the second wavelength dependence depends on the second wavelength-dependent optical element.

24. (New) The method of Claim 21, wherein the step of providing the linear polarizer configuration provides only one of the elements (a) and (b).

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